

REMARKS

Claims 1, 3 and 6 are amended and claims 2, 5 and 17 are canceled herein. Claims 1, 3, 4, 6-16, 18-25, 28-41 and 44-55 will be pending upon entry of the amendment.

RESPONSE TO REJECTION OF CLAIMS UNDER 35 USC §103

Claim 1

Claim 1 as amended herein is directed to an absorbent article for disposition at least partially within the vestibule of a female wearer. The absorbent article comprises a liquid permeable liner adapted for contiguous relationship with the wearer, an outer cover in generally superposed relationship with the liner, and an absorbent structure formed separate from the liner and the outer cover and disposed therebetween. The absorbent structure is sized and configured for insertion at least partially within the vestibule of the female wearer, and is constructed at least in part of hydrophilic fibers and superabsorbent material. A concentration of the superabsorbent material in the absorbent structure is in the range of about 5 weight percent to about 35 weight percent. The superabsorbent material has a gel stiffness index of at least about 0.5.

The absorbent structure has a saturation capacity as determined by a Saturation Capacity and Retention Capacity Test of at least about 15 grams/gram, a retention capacity as determined by said Saturation Capacity and Retention Capacity Test of at least about 3 grams/gram, and an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds.

The essence of claim 1 is the construction of the absorbent structure for disposition at least partially within

the vestibule of a female wearer and to have the recited combination of saturation capacity, retention capacity and intake time. As discussed at paragraph [0061], in the past, absorbent articles could deliver either a good fluid intake rate or provide for an acceptable fluid capacity, but not both. The absorbent structure recited in claim 1, however, is capable of achieving a combination of good saturation and retention capacity and a good fluid intake rate. In one example set forth in the present application, the particular superabsorbent material, concentration and gel stiffness index used to construct the absorbent structure provides the absorbent structure with the combination of good saturation and retention capacity and good intake rate.

Claim 1 is submitted to be non-obvious in view of and patentable over the references of record, and in particular US 2003/091442 (Bewick-Sonntag et al., referenced further herein as Bewick) in combination with U.S. Patent No. 5,836,929 (Bewick-Sonntag et al., referenced further herein as the '929 reference), in that whether considered alone or in combination the references fail to disclose or otherwise suggest an absorbent article comprised of an absorbent structure that is sized and configured for insertion at least partially within the vestibule of the female wearer, is constructed at least in part of hydrophilic fibers and superabsorbent material, with the superabsorbent material being in the recited concentration and having the recited gel stiffness index, and wherein the absorbent structure has the recited combination of saturation capacity, retention capacity and intake time.

Bewick discloses an absorbent device having a topsheet for contacting hydrous body tissues. In particular, as illustrated in Figs. 4 and 5, the absorbent device is an interlabial pad 20

composed of three key elements: 1) a highly adaptable absorbent structure able to macroscopically adapt to a unique anatomical shape, 2) a microscopically structured absorbent core/topsheet, and 3) a robust application/insertion design feature. See paragraphs [0016 - 0019]. With particular reference paragraphs [0110 - 0122], the absorbent core 44 is positioned between a topsheet 42 and back sheet 38 and provides the means for absorbing exudates such as menses.

According to Bewick, the absorbent core 44 in one embodiment is a fibrous batt, such as of rayon or a rayon/cotton blend. Paragraph [0113]. In other embodiments, the absorbent core 44 can comprise fibrous superabsorbent material in a concentration in the range of 25% to 100% and in particularly preferred embodiments a concentration above 70%. Paragraph [0114]. In one particular example, the superabsorbent fiber is FIBERDRI type 1162 superabsorbent fibers from Camelot Technologies Ltd. Of Alberta, Canada. Paragraphs [0119 and 0120]. In the working examples 2-5 described by Bewick, the absorbent core 44 comprised 50% of the FIBERDRI type 1162 superabsorbent fibers.

At paragraphs [0309 and 0310], Bewick describe an absorbent capacity test that is comparable to the retention capacity portion of the Saturation Capacity and Retention Capacity Test recited in claim 1 and described in the present application. Figure 23 of Bewick indicates that the absorbent capacity of the working Examples 2-5 of Bewick have an absorbent capacity of 7.3 grams/gram, which appears to meet the recited retention capacity of claim 1 of at least 3 grams/gram. The superabsorbent concentration for these Examples was 50 percent. See paragraph [0164].

Bewick fails, however, to expressly disclose the combination of a saturation capacity as determined by a Saturation Capacity and Retention Capacity Test of at least about 15 grams/gram, a retention capacity as determined by said Saturation Capacity and Retention Capacity Test of at least about 3 grams/gram, and an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds. In particular, Bewick fail to disclose, expressly or inherently¹, the recited saturation capacity and intake time. Moreover, there is no suggestion found anywhere in Bewick for modifying the absorbent core thereof to have the recited combination of retention capacity, saturation capacity and intake time. The '929 reference also fails to show or suggest such features (nor does the final Office action contend otherwise).

The final Office action, at page 2, last paragraph (and running onto page 3) takes the position that the recited saturation capacity, retention capacity and intake time are functional because they require testing of the absorbent structure for determination.² Applicants respectfully disagree. More commonly used material and/or structural characteristics such as length, thickness and the like are certainly not considered to be functional. Rather, they provide certain material and/or structural limitations to a

¹ Applicants previously submitted, in their Amendment A filed February 6, 2006, that the recited saturation capacity and intake time were not inherent in the disclosure of Bewick. However, the final Office action makes it clear that the Office's rejection is not based in any part on inherency. See page 7, second paragraph of the final Office action.

² While this position is set forth in the rejection of claim 24, it is presumed that a similar position is held with respect to claim 1 since a number of the characteristics are similarly recited in claims 1 and 24.

claim. The saturation capacity, retention capacity and intake time recited in claim 1 are material and/or structural characteristics of the recited absorbent structure in the same manner as a length, thickness or other characteristic would be. The fact that the tests for determining the saturation capacity, retention capacity and intake time are more involved than, say, using a ruler to measure the length of a recited structural member does not render these characteristics functional. Accordingly, these characteristics impart material and/or structural meaning to the recited absorbent structure to distinguish the absorbent structure of claim 1 over Bewick and the '929 reference (and the other references of record).

The final Office action further takes the position that the recited retention capacity, saturation capacity and intake time recited in claim 1 are obvious because it is not inventive to discover the optimum or workable ranges by routine experimentation, citing *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). As recognized by the Office, a particular parameter must first be recognized as a result-effective variable before the determination of the optimum or workable ranges of the parameter might be characterized as routine experimentation. MPEP §2144.05(II)(B), citing *In re Antonie*, 195 USPQ 6 (CCPA 1977).

In support of its optimization position, the final Office action states that the benefits of optimizing saturation capacity and/or retention capacity, intake time and rewet (which is not recited in claim 1 but is recited in one or more dependent claims) "would have been known prior to applying a test, making these values result-effective variables." The Office's position appears to be similar to the very position rejected by the court in *In re Antonie*. In particular, the

court noted that an assertion that it would always be obvious or ordinary skill in the art to try varying every parameter of a system in order to optimize the effectiveness of the system is improper "if there is no evidence in the record that the **prior art** recognized that particular parameter affected the result. *Id.* at 8 (emphasis added). Thus, the court made it clear that the recognition of a particular parameter as a result-effective variable must come from the cited reference, i.e., in this case Bewick.

Applicants respectfully submit that the final Office action fails to provide any evidence that the intake time (and rewet time, for that matter) of the absorbent structure are result-effective variables. While Bewick do discuss absorbent capacity of the absorbent core 44 disclosed therein, there is no discussion whatsoever by Bewick (or the '929 reference) of the intake time (or rewet time) of the absorbent core. At page 7 of the final Office action, the Office relies on the disclosure by Bewick at paragraph 100 thereof of a topsheet 42 (e.g., a liner of the absorbent article) that has a reduced tendency to allow liquids to pass back through and rewet the wearer's skin.

In particular, the final Office action relies on Bewick's reference to U.S. Patent No. 4,324,246 (Mullane et al.) as teaching the desirability of maximizing strikethrough time and rewet value. See page 7 of the final Office action. However, while the final Office action asserts that Mullane et al. is incorporated by reference into Bewick, this is respectfully an incorrect assertion. See paragraph [0100] of Bewick. Thus, to the extent the Office wishes to rely on Mullane et al. to reject claim 1 the rejection must rely on a combination of Bewick, the '929 reference and Mullane et al. However, there

is no motivation or suggestion made by either of these references that would lead one skilled in the art to modify the absorbent core of Bewick et al. to have the combination of the saturation capacity, retention capacity and intake time recited in claim 1.

Moreover, Mullane et al. is specifically directed to (and Bewick refers to Mullane et al. only as disclosing) a topsheet (e.g., a liner) that has an improved strikethrough. In particular, the topsheet 12 of Mullane et al. is an apertured formed film having a multiplicity of individual fibers dispersed over and affixed to the inner surface of the topsheet. Thus, the teachings of Mullane et al. are limited entirely to the construction and operation of the topsheet. There is no teaching or suggestion of the relationship between an absorbent structure, such as the absorbent core 16 of Mullane et al., and intake time (or intake rate) of the absorbent structure. Rather, at the most one skilled in the art may be motivated by Mullane et al. to modify the topsheet of Bewick in the manner disclosed by Mullane et al. However, such a teaching does not amount to a teaching that intake time is a result-effective variable for an absorbent core and would not motivate one skilled in the art to modify the absorbent core of Bewick to provide the combination of retention capacity, saturation capacity and intake time recited in claim 1.

For the above reasons, claim 1 is submitted to be non-obvious and patentable over the cited references.

Claims 22 and 23 particularly recite a rewet characteristic of the recited absorbent structure. Bewick is silent as to the rewet of the absorbent core 44 thereof and clearly does not recognize rewet of the absorbent structure as

a result-effective variable. To the extent that Mullane et al. discuss rewet, it is in terms of the topsheet construction and not an absorbent core. For these additional reasons, claims 22 and 23 are further submitted to be patentable over the references of record.

Claim 24

Claim 24 is directed to an absorbent article for disposition at least partially within the vestibule of a female wearer, said absorbent article comprising:

an absorbent structure sized and configured for insertion at least partially within the vestibule of the female wearer, said absorbent structure comprising in the range of about 5 weight percent to about 15 weight percent superabsorbent material, said absorbent structure having a basis weight in the range of about 150 to about 400 grams per square meter and a density in the range of about 0.05 to about 0.13 grams per cubic centimeter, said absorbent structure having a saturation capacity as determined by a Saturation Capacity and Retention Capacity Test of at least about 15 grams/gram and a retention capacity as determined by said Saturation Capacity and Retention Capacity Test of at least about 3 grams/gram.

The superabsorbent material concentration in the recited range provides for improved intake times during use of the absorbent article while still providing the recited saturation and retention capacities. See, for example, codes 8 and 10 of Fig. 12 of the present application.

Claim 24 is submitted to be non-obvious in view of and patentable over the references of record, and in particular Bewick, in that whether considered alone or in combination the references fail to disclose or suggest an absorbent article

having an absorbent structure that is 1) sized and configured for insertion at least partially within the vestibule of the female wearer, 2) comprised of 5 to 15 weight percent superabsorbent material and 3) has the recited basis weight, density, retention capacity and saturation capacity.

In addition to the arguments set forth above in connection with claim 1 regarding the Office's assertions that the saturation capacity and retention capacity are functional and are obvious as being result-effective variables, applicants particularly note that claim 24 also recites a superabsorbent material concentration in the range of about 5 to about 15 percent. As noted previously, Bewick disclose a superabsorbent fiber concentration in the range of 25-100 percent, and in a particularly preferred embodiment it is 70 percent. The Examples of Bewick each disclose an absorbent core having a superabsorbent concentration of 50 percent. Thus, Bewick clearly fails to teach a superabsorbent material concentration in the range of about 5 to about 15 percent as recited in claim 24.

Moreover, there is no suggestion found anywhere in Bewick for providing the superabsorbent fiber in a concentration of about 5 to about 15 percent. Rather, the focus of the absorbent core of Bewick is on the absorbency thereof and there is no focus on the intake time or other performance characteristics of the absorbent core. Thus, one skilled in the art would not be motivated by Bewick to provide the absorbent core with a superabsorbent material concentration that is below 25 percent. That is, going below the 25 percent would have a negative effect on the absorbency of the core and therefore violate the teachings of Bewick.

Also, the only data provided by Bewick regarding the absorbency provided by the superabsorbent material is the data in Fig. 23 for Examples 2-5 wherein the HGW Capacity is identified as 7.3 grams. This data was obtained at a superabsorbent material concentration of 50 percent. There is no disclosure by Bewick, however, as to what happens to this capacity as the superabsorbent material concentration goes down to 25 percent, let alone below 25 percent or even in the range of 15-25 percent as recited in claim 24. Thus, there is no reason that one skilled in the art would believe, based on the disclosure of Bewick, that the retention capacity would remain in the range recited in claim 24 if the superabsorbent material concentration was reduced from 50 percent down to about 5 to about 15 percent as recited in claim 24. Indeed, based on the express teachings of Bewick not to go below 25 percent, one skilled in the art would not be motivated to do so.

For these reasons claim 24 is submitted to be patentable over the references of record.

Claims 25-40 depend directly or indirectly from claim 24 and are submitted to be patentable over the references of record for the same reasons as claim 24.

Claim 41

Claim 41 is directed to an absorbent article for disposition at least partially within the vestibule of a female wearer. The absorbent articles comprises an absorbent structure sized and configured for insertion at least partially within the vestibule of the female wearer. The absorbent structure comprises in the range of about 5 weight percent to about 35 weight percent superabsorbent material, said absorbent structure having a basis weight in the range of about 150 to

about 400 grams per square meter and a density in the range of about 0.05 to about 0.13 grams per cubic centimeter, said absorbent structure having an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds.

Claim 41 is submitted to be non-obvious in view of and patentable over the cited references and in particular Bewick, for reasons substantially similar to those set forth above for claim 1. In particular, Bewick neither expressly nor inherently discloses the recited intake time and also fails to provide any teaching that the intake time of the absorbent structure itself is a result-effective variable.

Claims 42-55 depend directly or indirectly from claim 41 and are submitted to be patentable over the references of record for the same reasons as claim 41.

Conclusion

In view of the above, applicant respectfully requests favorable consideration and allowance of claims 1, 3, 4, 6-16, 18-25, 28-41 and 44-55 as now presented.

Respectfully submitted,

/Richard L. Bridge/

Richard L. Bridge, Reg. No. 40,529
SENNIGER POWERS
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

RLB/tmg